A Collection of Porifera from Northern New Zealand, with Descriptions of Seventeen New Species

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THE MATERIAL DESCRIBED HEREIN has been collected by the author during the course of investigations into the intertidal and sublittoral ecology of the sponges of Northland.

Burton (1932), in reporting the "Discovery" Antarctic sponges, remarked on the relatively advanced state of knowledge of that fauna and added only 35 new species from this collection. In strong contrast stands the lack of knowledge of the littoral sponge faunas of New Zealand, particularly of the siliceous groups. The present collection contains 34 species, all relatively common members of the northern shore faunas. Of this number, 17 are new species, and 11 are recorded for the first time from New Zealand.

No Calcarea are included in the present study. They are, in general, better known than the Demospongiae, as most of the published work by Kirk dealt with this group.

All type material is to be deposited in the Dominion Museum, Wellington.

SYSTEMATIC DISCUSSION

The scheme of classification followed is that of de Laubenfels (1936).

CLASS DEMOSPONGIAE (Sollas)

ORDER KERATOSA (Grant)

FAMILY SPONGIIDAE (Gray)

GENUS *Ircinia* (Nardo)

Ircinia novae zealandiae, sp. nov.
Fig. 1*a*

OCCURRENCE: Noises Islands, Hauraki Gulf. 12/10/56.[2]

DESCRIPTION: The sponge is irregularly palmo-digitate in shape, the surface irregularly conulose. Oscules are small, 1–2 mm. in diameter, few in number, and indiscriminately scattered. The texture when dried is hard and the colour blackish-brown. The texture when fresh is elastic and the colour blackish.

The skeleton is a reticulation of strongly fasciculated fibres showing obvious differentiation into ascending and connective fibres. These fibres vary from .02 to 1.0 mm. in diameter. Foreign inclusions are occasionally present, sometimes filling the whole of a fibre. Filaments are not common and are .004 mm. in diameter.

GENUS *Spongia* (Linnaeus)

Spongia reticulata (Lendenfeld)

Euspongia reticulata (Lendenfeld, 1886, p. 541).

Hippospongia reticulata (Lendenfeld, 1889, p. 300, pl. 13, fig. 3).

OCCURRENCE: Rangitoto sublittoral fringe.
DISTRIBUTION: Australia.

FAMILY DYSIDEIDAE (Gray)

GENUS *Dysidea* (Johnston)

Dysidea cristagalli, sp. nov.
Fig. 1*b*

OCCURRENCE: Noises Islands, 2/5/37 (coll. L. B. Moore). Rangitoto, 7/6/57. In rock pools in caves.

DESCRIPTION: The sponge is erect, tubular in shape, with several tubes coalescing to give a tubula-flabellate condition. The surface is uneven and the oscules apical, giving access to deep cloacae. The texture is firm and friable, the colour ash-grey. The skeleton is an irregular, closely knit reticulation of fibres varying in diameter from .02 to .2 mm. and having no obvious distinction between ascending and connective fibres. The fibres are filled with broken sponge spicules. There is no special dermal skeleton differentiated.

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[2] In this paper, dates are given as day/month/year.

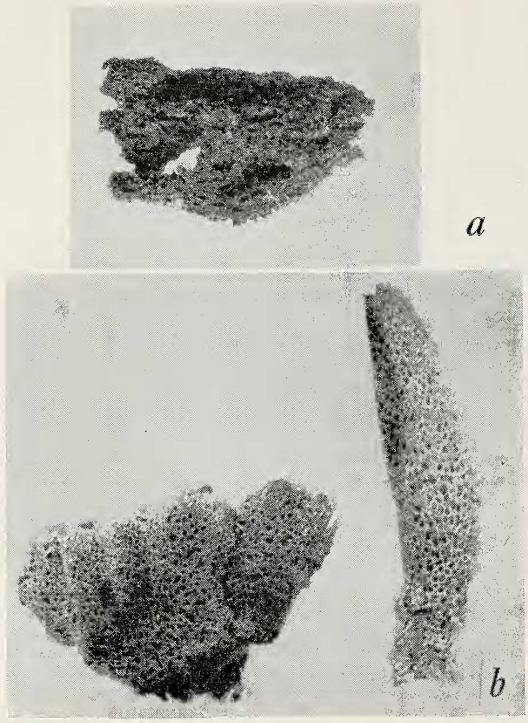


FIG. 1. *a, Ircinia novae zealandiae,* sp. nov. *b, Dysidea cristagalli,* sp. nov.

ORDER **HAPLOSCLERINA** (Topsent)

FAMILY HALICLONIDAE (de Laubenfels)

GENUS *Haliclona* (Grant)

Haliclona isodictyale, sp. nov.
Fig. 2*a, b*

OCCURRENCE: Waitawa Bay, Clevedon, 31/10/35 (coll. L. B. Moore). Waitawa Bay, Clevedon, 2/10/58. Point Chevalier Reef, 6/7/57.

DESCRIPTION: This sponge is an encrusting form with a maximum thickness of 3 mm. Its surface is minutely shaggy and hispid. The oscules are apical on tubular processes, as is characteristic of many haliclonids. The texture is soft and friable. In life the colour is pale cream, in spirit pale brownish-white. The skeleton is a subregularly-isodictyal reticulation, mainly unispicular.

Spicules. Megascleres: oxea .13 mm. × .007 mm. Microscleres: absent.

Haliclona tenacior, sp. nov.
Fig. 3*a, b*

OCCURRENCE: Waitawa Bay, Clevedon, on rocks or seaweed. Rangitoto, on rocks.

DESCRIPTION: An encrusting to irregularly massive sponge infested with commensal polychaete worms. Its surface is uneven, minutely and irregularly subpapillose. Oscula are few and inconspicuous. Texture is firm and friable. The colour in life is dirty-muddy cream, in spirit

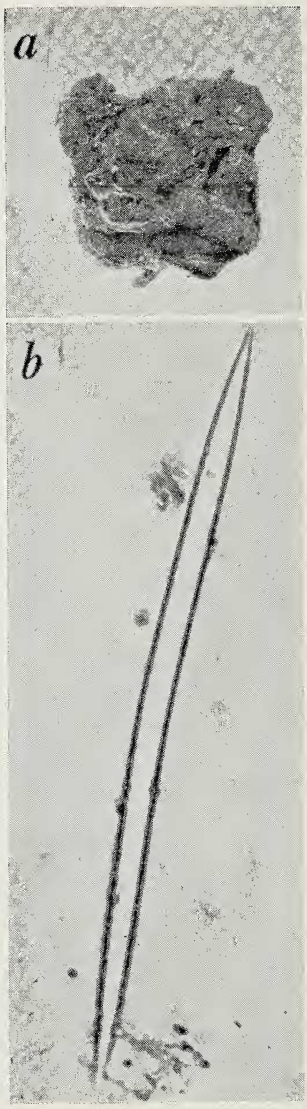


FIG. 2. *a, Haliclona isodictyale,* sp. nov. *b, Haliclona isodictyale,* typical oxea (× 350).

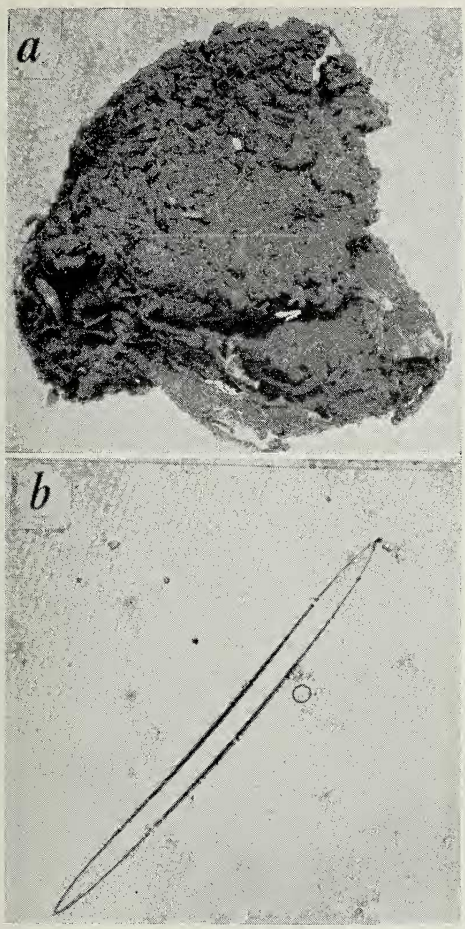


FIG. 3. *a, Haliclona tenacior,* sp. nov. *b, Haliclona tenacior,* typical oxea (× 350).

light greenish-brown. The skeleton is a closely knit reticulation of systems of fibres ranging from uni- to multispicular.

Spicules. Megascleres: oxea .14 mm. × .007 mm. Microscleres: absent.

Haliclona glabra, sp. nov.
Fig. 4

OCCURRENCE: Stanley Bay, under sides of boulders at low tidal levels.

DESCRIPTION: A thinly encrusting sponge with even, minutely hispid surface. The oscules are few, minute, and scattered. Texture is firm and friable. Colour in life is dull cream, in spirit pale brownish-white. The skeleton is an isodictyal reticulation, the ascending fibres of which are triangular. Connectives are unispicular.

Spicules. Megascleres: oxea .152 mm. × .007 mm. Microscleres: absent.

Haliclona heterofibrosa (Lundbeck)

Reniera heterofibrosa Lundbeck, 1902, p. 47, pls. 2, 11, figs. 8, 14; Brøndsted, 1923, p. 121; Hentschel, 1929, p. 983.

OCCURRENCE: Rangitoto Island. Point Chevalier Reef. Under sides of stones up to half tide.

REMARKS: Quite typical specimens, soft texture, ranging in colour from creamy yellow to faintly purple.

DISTRIBUTION: Arctic; Campbell Islands Subantarctic.

Haliclona clathrata (Dendy)

Reniera clathrata Dendy, 1895, p. 237; Brøndsted, 1923, p. 125; 1924*a*, p. 453); ? *R.* spec. 4, Hentschel, 1912, p. 410.

OCCURRENCE: Karaka Bay (St. Helier's).

REMARKS: Single specimen collected agrees so closely in external form with the holotype of *H. clathrata* (Dendy) that there seems every reason to refer it to this species. Structure of the skeleton is closely similar.

AUSTRALIA	N. Z.	CAMPBELL IS.	N. Z. (Br.)
Oxea .083 × .005 mm.	.157 × .007 mm.	.085–.115 × .005 mm.	.09–.105 × .004 to .006 mm.

This species appears to be a typical haliclonid insofar as the spicule sizes vary from specimen

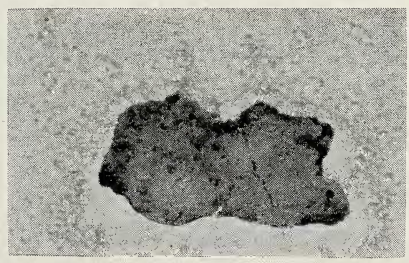


FIG. 4. *Haliclona glabra,* sp. nov.

to specimen. Small variations in this respect cannot be considered grounds for differentiating the present specimen from *H. clathrata.*

DISTRIBUTION: Australia (south coast); New Zealand; Campbell Islands.

Haliclona petrosioides (Burton)

Haliclona petrosioides Burton, 1932, p. 269, fig. 7.

OCCURRENCE: Rangitoto sublittoral fringe.

REMARKS: Specimens are thinly encrusting, up to 3 mm. thick, deep cream in colour. Surface conspicuously porose with conspicuous channels radiating in a stellate manner from small ill-defined oscules. The spiculation is identical with that of the holotype.

DISTRIBUTION: Tristan da Cunha (South Atlantic).

FAMILY CALLYSPONGIDAE (de Laubenfels)

GENUS *Callyspongia* (Duchassaing & Michelotti)

Callyspongia ramosa (Gray)

Synonymy: See Burton, 1934, p. 603.

OCCURRENCE: Noises Islands; Kawau Island; Narrow Neck.

REMARKS: An erect branching sponge, purple in life. Commonly washed up on Auckland beaches.

DISTRIBUTION: New Zealand; Australia; Antarctica.

ORDER **POECILOSCLERINA** (Topsent)

GROUP PHORBASIFORMES (de Laubenfels)

FAMILY PHORBASIDAE (de Laubenfels)

GENUS *Phorbas* (Duchassaing & Michelotti)

Phorbas intermedia, sp. nov.
Fig. 5*a, b*

OCCURRENCE: Rangitoto; Karaka Bay (St. Helier's).

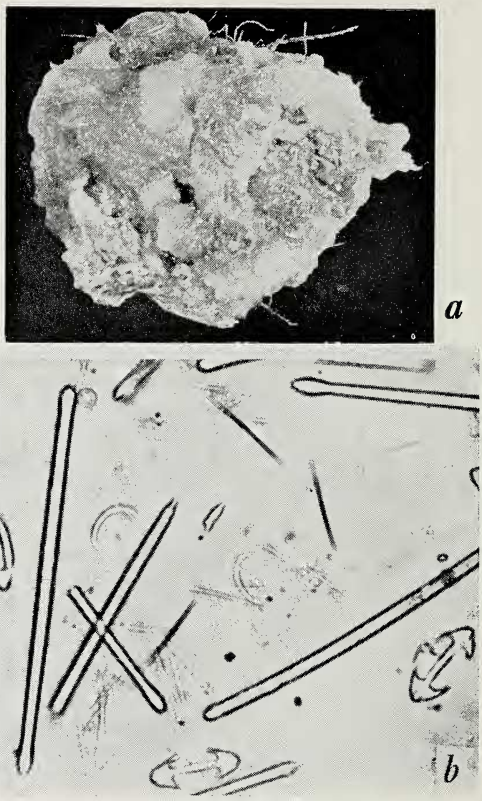


FIG. 5. *a, Phorbas intermedia,* sp. nov. *b, Phorbas intermedia,* acanthotornota, acanthostyles, isochelae, sigmata, raphides (× 350).

DESCRIPTION: An irregularly massive sponge with an uneven to minutely papillate surface. Oscula are not apparent. The texture is firm. Colour in life is a rich yellow, in spirit a pale yellow. The skeleton, a confused system of ascending fibres branching and anastomosing, is composed of bundles of acanthostyli of two sizes and tornota. There is a dermal palisade of brushes of tornota.

Spicules. Megascleres: (a) acanthostyles .17 to .22 mm. × .005 to .007 mm.; (b) acanthostyles .09 × .004 mm.; (c) tornota with subtylote microspined ends—.15 × .004 to .006 mm. There are numerous intermediates between acanthostyli and tornota. Microscleres: (a) arcuate isochelae .04 × .045 mm. chord; (b) sigmata .017 × .021 mm. chord; (c) raphides .04 × .07 mm. long.

FAMILY ADOCIIDAE (de Laubenfels)

GENUS *Adocia* (Gray)

Adocia parietalioides, sp. nov.
Fig. 6*a, b*

OCCURRENCE: Rangitoto Island; littoral.

DESCRIPTION: An encrusting sponge with even, porose surface. Oscules small, 1–2 mm. in diameter, few in number, and level with the surface. Texture firm and friable. Colour in life faintly pink, in spirit pale brownish white. Main and dermal skeletons unispicular.

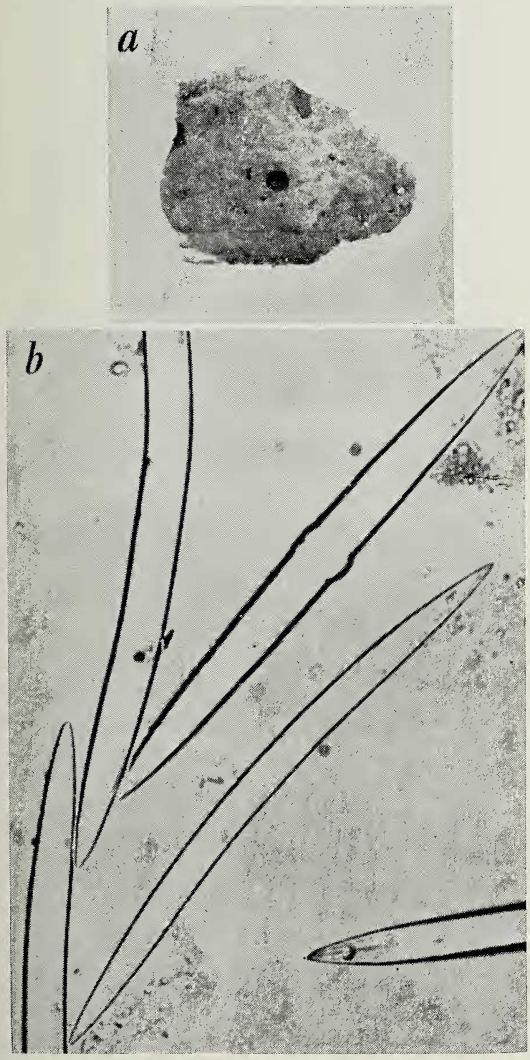


FIG. 6. *a, Adocia parietalioides,* sp. nov. *b, Adocia parietalioides,* typical oxea (× 350).

Spicules. Megascleres: oxea .15 × .01 mm. Microscleres: absent.

REMARKS: This species is most closely related to *A. parietalis* (Topsent) from the Mediterranean, from which species it differs in: (a) the absence of subdermal canals radiating from the oscules; (b) the character of the undersurface of the free edges (which in *A. parietalis* "releve . . . et y developpe a sa face inferieure un feutrage plus serre des spicules . . ."); (c) the size of the oxea, which are .01 mm. in thickness, as opposed to .005 mm. in *A. parietalis.*

Adocia venustina, sp. nov.
Fig. 7*a, b*

OCCURRENCE: Noises Islands, in mouth of cave; Rangitoto, in mouth of cave.

DESCRIPTION: A sponge ranging in habit from encrusting to massive and depressed. Surface is uneven and glabrous. Oscules are numerous, subpapillate, 1–3 mm. in diameter. This sponge is of firm, friable texture. Colour in life yellow, in spirit dull yellowish brown. The main skeleton is isodictyal or sub-isodictyal, chiefly unispicular, but having occasional bispicular ascending fibres. The dermal skeleton is unispicular with mainly triangular mesh.

Spicules. Megascleres: oxea .1 × .004 mm. Microscleres: absent.

GENUS *Toxadocia* (de Laubenfels)

Toxadocia toxophorus (Hentschel)

Gellius toxophorus Hentschel, 1912, p. 392, pl. 21, fig. 46.

Gellius toxotes Hentschel, 1912, p. 392, pl. 21, fig. 47.

OCCURRENCE: Rangitoto sublittoral fringe.

REMARKS: The species is represented by cushion-shaped masses up to 1 cm. thick, pale cream in colour, with firm uneven surfaces. The oscules are scattered, 1–2 mm. in diameter. Skeleton is a loose subhalichondroid reticulation, mainly unispicular, of oxea tending to be

strongylote, .24 × .014 mm., and with toxa .035 to .052 mm. long, for microscleres.

The old genus *Gellius* has been split by de Laubenfels (1936) into several genera and the present species is referred to *Toxadocia.*

DISTRIBUTION: Aru Islands (Malay Archipelago), 4–6 fathoms.

GROUP MICROCIONIFORMES (de Laubenfels)

FAMILY MICROCIONIDAE (Hentschel)

GENUS *Microciona* (Bowerbank)

Microciona coccinea, sp. nov.
Fig. 8*a, b*

OCCURRENCE: Stanley Bay, under sides of stones at low tide. Onetangi, Waiheke Island, on roof of cave at low tide.

DESCRIPTION: A thinly encrusting sponge with uneven surface over which oscula are not apparent. Texture is soft. Colour when alive is scarlet, in spirit rusty brown. The skeleton is low plumose columns of basally spined styli and of acanthostyli. Scattered loose between the columns and forming a loose tangential layer in the dermis are auxiliary subtylostyli.

Spicules. Megascleres: (a) basally spined styli .24 to .4 × .012 to .016 mm.; (b) acanthostyli .08 to .21 × .007 to .014 mm.; (c) subtylostyli .14 to .28 × .003 to .004 mm. Microscleres: toxas .05 to .07 mm. chord.

Microciona rubens, sp. nov.
Fig. 9*a, b*

OCCURRENCE: Waitawa Bay, Clevedon, encrusting rocks at 2 fathoms.

DESCRIPTION: An encrusting sponge with an uneven, minutely and irregularly mammilate surface on which oscules are not apparent. Texture firm. Colour in life vermillion red, in spirit pale brownish yellow to dark brown. The skeleton is made up of plumose columns of basally spined styli (rarely completely smooth) and of acanthostyli. Auxiliary subtylostyli are associated with these columns and form an irregular tangential layer in the dermis.

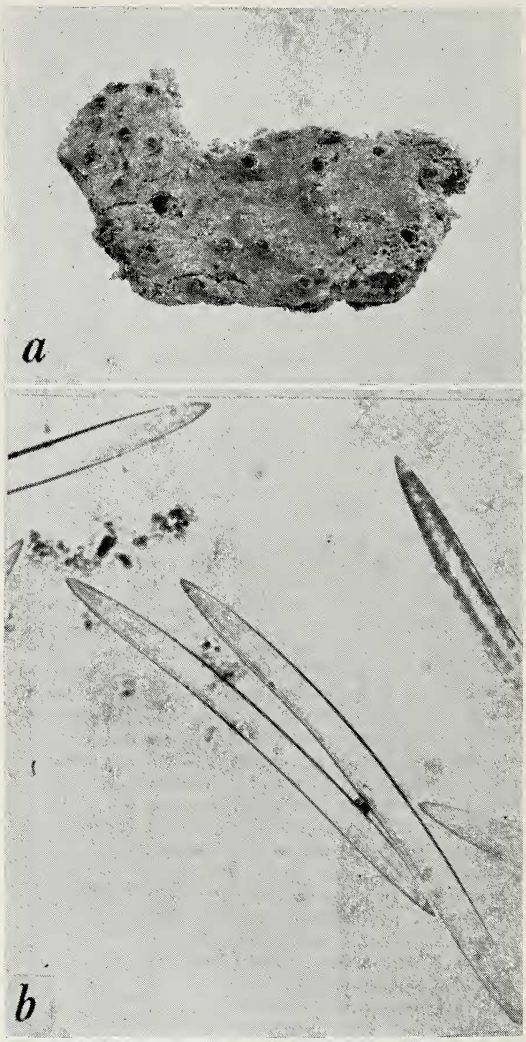


FIG. 7. *a, Adocia venustina,* sp. nov. *b, Adocia venustina,* typical oxea (× 350).

Spicules. Megascleres: (a) basally spined styli .14 to .53 × .021 mm.; (b) acanthostyli .09 × .011 mm.; (c) subtylostyli .11 to .28 × .003 to .005 mm. Microscleres: (a) palmate isochelae .008 mm. chord; (b) toxa .04 to .07 mm. chord.

REMARKS: This species is most closely related to *Clathria mortensenii* (Brøndsted), which has been transferred to *Microciona* by de Laubenfels (1936). Spicule dimensions in the present specimens differ widely from those described by Brøndsted.

Microciona heterospiculata (Brøndsted)

M. heterospiculata Brøndsted, 1924*a*, p. 465, fig. 20.

OCCURRENCE: Point Chevalier Reef; Karaka Bay; Stanley Bay. Up to half tide encrusting rocks.

DISTRIBUTION: New Zealand.

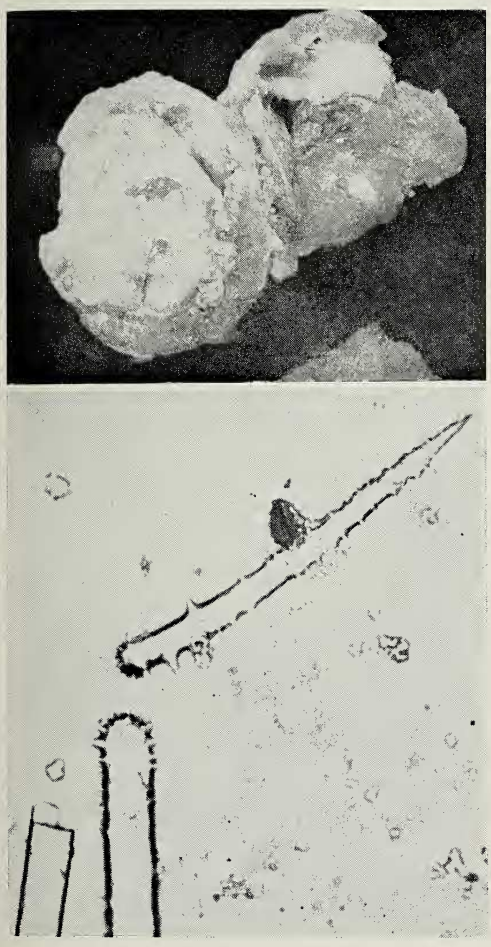


FIG. 8. *a, Microciona coccinea,* sp. nov. *b, Microciona coccinea,* acanthostyle, basally spined style.

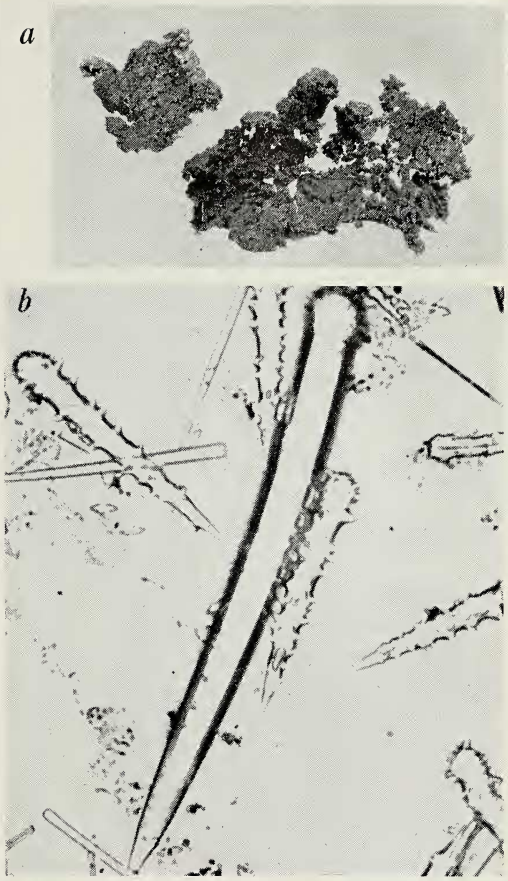


FIG. 9. *a, Microciona rubens,* sp. nov. *b, Microciona rubens,* spined style, acanthostyles, subtylostyle, isochelae (× 350).

FAMILY OPHLITASPONGIIDAE (de Laubenfels)

GENUS *Mycale* (Gray)

Mycale rara (Dendy)

Esperella rara Dendy, 1896, p. 18.

OCCURRENCE: Ahipara Bay.

REMARKS: The one specimen, yellow and soft in life, agrees closely with Dendy's original specimen, except that trichodragmata appear to be absent. Occasional isochelae .017 mm. chord occur.

DISTRIBUTION: Australia.

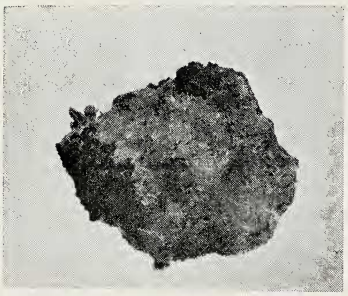
FAMILY AMPHILECTIDAE (de Laubenfels)

GENUS *Biemna* (Gray)

Biemna rhabderemioides, sp. nov.
Fig. 10*a, b*

OCCURRENCE: Rangitoto, under stones at about half tide.

DESCRIPTION: An encrusting to massive and low-lying sponge, the surface of which is minutely reticulate, conulose, and hispid. The oscules are not apparent. Texture is firm. Colour in life bright yellow, in spirit pale yellowish-brown. The skeleton is an irregular reticulation of styli and subtylostyli bent in the basal third and crooked at the proximal end.



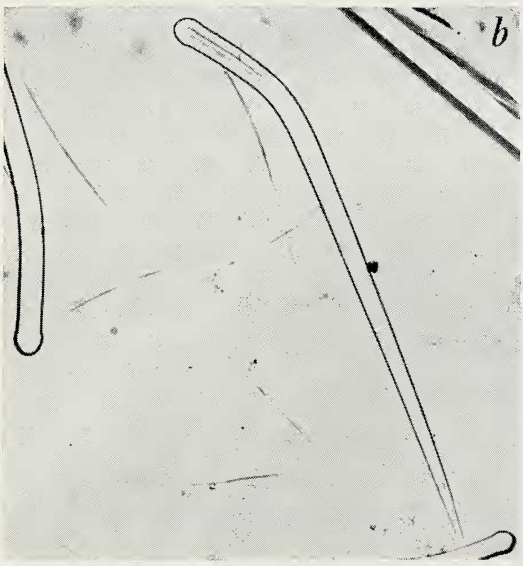


FIG. 10. *a, Biemna rhabderemioides,* sp. nov. *b, Biemna rhabderemioides,* subtylostyli, raphides (× 350).

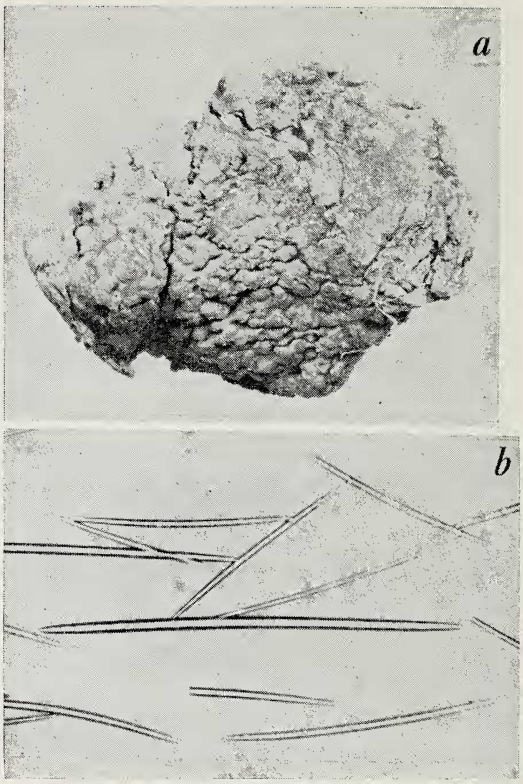


FIG. 11. *a, Halichondria moorei,* sp. nov. *b, Halichondria moorei,* oxea (× 80).

Spicules. Megascleres: (a) styli .42 to .47 × .01 to .016 mm.; (b) subtylostyli .42 to .48 × .01 to .016 mm. Microscleres: (a) sigmata (two sizes) .042 to .045 and .012 to .014 mm. chord; (b) raphides .09 mm. long; (c) microxea .05 × .003 mm.

ORDER **HALICHONDRINA** (Vosmaer)

FAMILY HALICHONDRIIDAE (Gray)

GENUS *Halichondria* (Fleming)

Halichondria moorei, sp. nov.
Fig. 11*a, b*

OCCURRENCE: Point Chevalier Reef; Karaka Bay (St. Helier's); Parnell Reef.

DESCRIPTION: A massive, somewhat depressed sponge with surface wrinkled and irregularly folded. Oscula not apparent. Colour alive pinkish-

orange (Munsell, rY–R 7/8), in spirit nearly white. Both main and dermal skeletons typical for the genus.

Spicules. Megascleres: oxea .3 to .8 × .005 to .017 mm. Microscleres: absent.

REMARKS: The tissues of this sponge are so heavily filled with opaque pigment cells that it is possible to study the arrangement of the skeleton only with the utmost difficulty.

Halichondria panicea (Pallas)

Spongia panicea Pallas, 1766, p. 388.
Halichondria panicea Johnston, 1842, p. 114.

OCCURRENCE: Point Chevalier Reef.

DISTRIBUTION: Arctic; Atlantic coasts of Europe and North America; Mediterranean; Azores; South Africa; Antarctic; New Zealand; extreme southern shores of South America; Japan; Sea of Japan.

FAMILY HYMENIACIDONIDAE (de Laubenfels)

GENUS *Hymeniacidon* (Bowerbank)

Hymeniacidon perlevis (Montague)

Spongia perlevis (Montague, 1818, p. 86) = *H. sanguinea* (Grant) and *H. caruncula* (Bowerbank).

OCCURRENCE: Waitawa Bay, Clevedon; Anawhata; Stanley Bay. Lower midlittoral.

REMARKS: Bright orange-yellow, tending toward orange when in shadow. The earlier name, *H. perlevis* (Montague), almost entirely overlooked in the literature, must take precedence over the more familiar names.

DISTRIBUTION: Arctic; Atlantic coast of Europe; Mediterranean; West Africa; South Africa; Australia; New Zealand; Japan.

FAMILY AXINELLIDAE (Ridley and Dendy)
SUBFAMILY AXINELLINAE (de Laubenfels)

GENUS *Axiamon* (Hallman)

Axiamon erecta (Brøndsted)
Fig. 12

Hymeniacidon erecta Brøndsted, 1924*a*, p. 479, fig. 32.

OCCURRENCE: Kawau Island. Commonly washed up on Auckland beaches.

REMARKS: Two of Brøndsted's species of *Hymenacidon, novae zealandiae* and *erecta,* were relegated to *Axiamon* by de Laubenfels (1936: 130). This species has never before been figured, and therefore a photograph is appended.

DISTRIBUTION: New Zealand.

ORDER HADROMERINA (Topsent)
FAMILY CHOANITIDAE (de Laubenfels)
SUBFAMILY CHOANITINAE (de Laubenfels)

GENUS *Rhabderemia* (Topsent)

Rhabderemia stellata, sp. nov.
Fig. 13*a, b, c*

OCCURRENCE: Rangitoto Island, under stones at low tide.

FIG. 12. *Axiamon erecta* (Brøndsted).

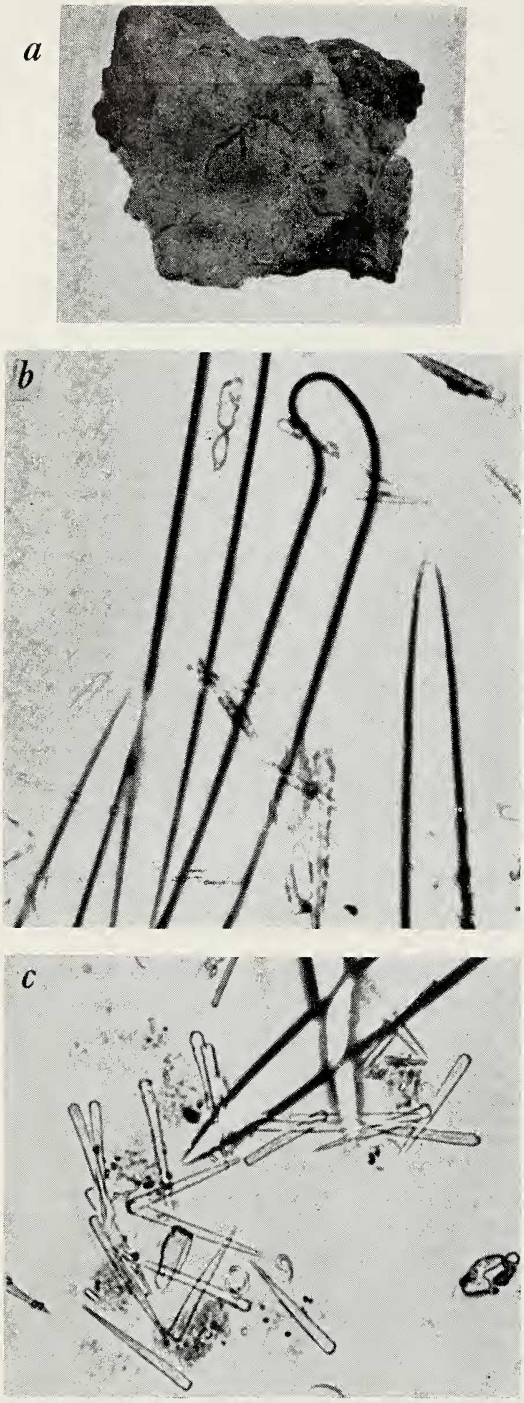


FIG. 13. *a, Rhabderemia stellata,* sp. nov. *b, Rhabderemia stellata,* rhabdostyles, acanthostyli (× 350). *c, Rhabderemia stellata,* contorted sigmas (× 350).

DESCRIPTION: An encrusting sponge with porose surface copiously marked by subdermal grooves. Oscules are small, sometimes the grooves radiate in stellate manner from them. Colour in life yellow, in spirit pale brown. The skeleton is a reticulation with subplumose ascending fibres and connectives, mainly unispicular, of rhabdostyli.

Spicules. Megascleres: rhabdostyles .21 to .32 × .015 to .021 mm. Microscleres: (a) acanthostyli .039 to .045 × .003 to .004 mm.; (b) much-contorted sigmas .011 to .017 mm. chord; (c) quadriradiate spicules (calthrops?) with rays .014 to .024 mm. (These are found occasionally in a subdermal position and appear to be foreign inclusions.)

FAMILY SUBERITIDAE (Schmidt)

GENUS *Suberites* (Nardo)

Suberites cupuloides, sp. nov.
Fig. 14*a, b*

OCCURRENCE: Rangitoto, littoral in swiftly flowing water. Onetangi Beach in similar habitat.

DESCRIPTION: A massive sponge with large rounded lobes. The surface is even and minutely hispid. Oscules are not apparent. The texture is firm and fleshy. Colour in life is yellowish-scarlet, in spirit yellowish-brown. The skeleton is of loose, subplumose ascending fibres, ending at the surface in paniculate brushes. Megascleres are of two distinct sizes, the smaller occurring mainly in the dermal brushes.

Spicules. Megascleres: tylostyli .17 to 8 × .011 to .018 mm. Microscleres: absent.

GENUS *Isociella* (Hallmann)

Isociella incrustans, sp. nov.
Fig. 15*a, b*

OCCURRENCE: Ahipara Bay, on ledge under rocks at low tide.

DESCRIPTION: This sponge ranges in form from encrusting to massive and spreading. Its surface is uneven and minutely mammillate. Oscules are small, scattered or irregularly grouped. Often with radiating subdermal channels. The texture is firm and resilient. Colour in life scar-

let, in spirit whitish. The skeleton is an irregular reticulation of fibres cored and quasi-echinated by main styli (often subtylostylote) of two sizes. Auxiliary subtylostyli of two sizes present. Dermal skeleton is a tangential layer of larger subtylostyli echinated by a palisade of smaller subtylostyli.

Spicules. Megascleres: (a) main styli (2 sizes): .32 to .35 × .013 to .014 mm.; .2 to .24 × .007 to .011 mm.; (b) auxiliary subtylostyli (2 sizes): .28 to .34 × .007 to .011 mm.; .14 to .23 × .003 to .006 mm. Microscleres: palmate isochelae .011 to .014 mm. chord.

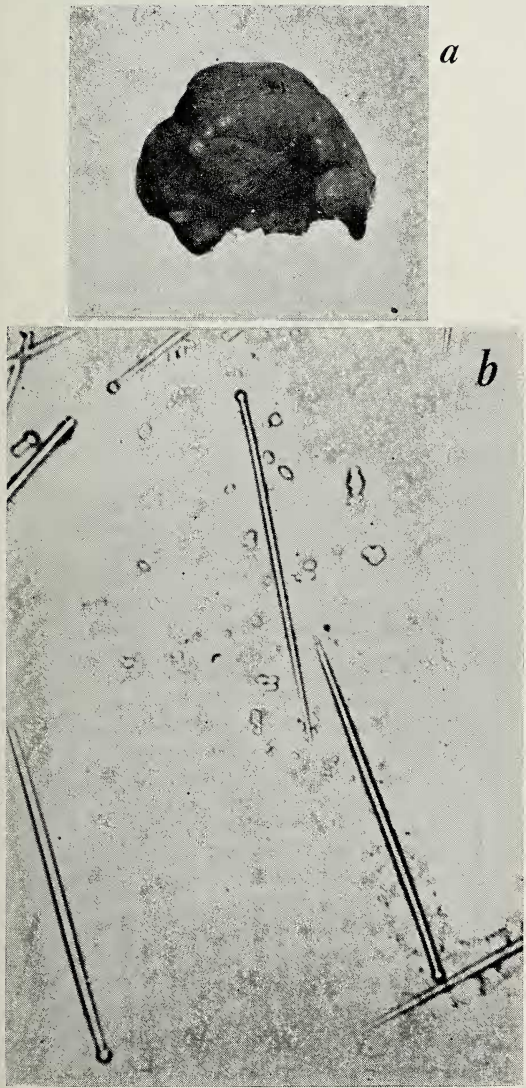


FIG. 14. *a, Suberites cupuloides,* sp. nov. *b, Suberites cupuloides,* tylostyli (× 350).

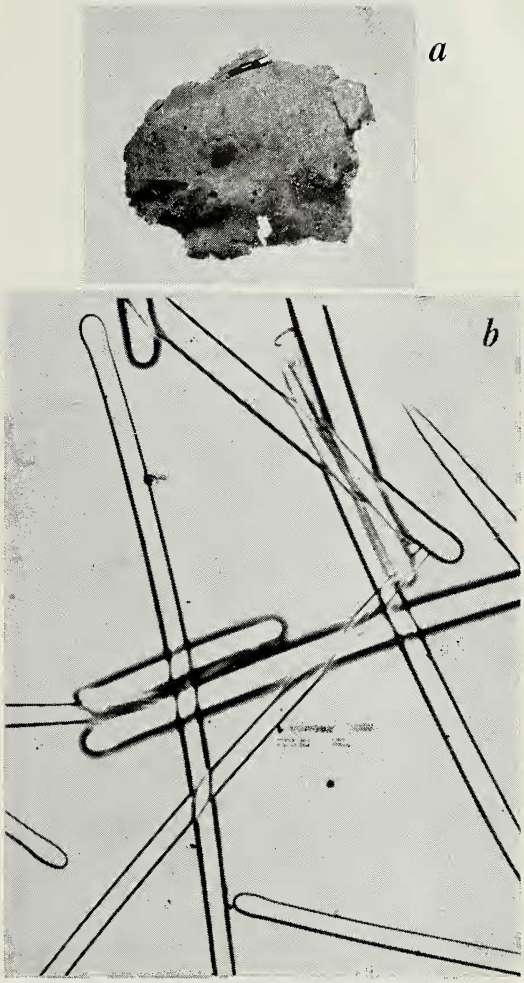


FIG. 15. *a, Isociella incrustans,* sp. nov. *b, Isociella incrustans,* styli, subtylostyli, isochelae (× 350).

GENUS *Polymastia* (Bowerbank)

Polymastia fusca, sp. nov.
Fig. 16*a, b*

OCCURRENCE: Burgess Bay, Kawau Island, under rock ledge. Ahipara Bay, under rock ledge. Spirits Bay, under rock ledge.

DESCRIPTION: A massive, spreading sponge, with numerous low wartlike papillae. Surface is even and minutely hispid. The oscules are small, apical on the papillae. The texture is firm and

fleshy. Colour in life greenish to chocolate brown (Munsell, rY–R 8/4), in spirit pale brown. The skeleton is of stout radiating bundles of large subtylostyli, with medium-size and small subtylostyli scattered thickly in the choanosome and forming a dense subdermal layer. The dermal skeleton is a palisade of mainly small subtylostyli.

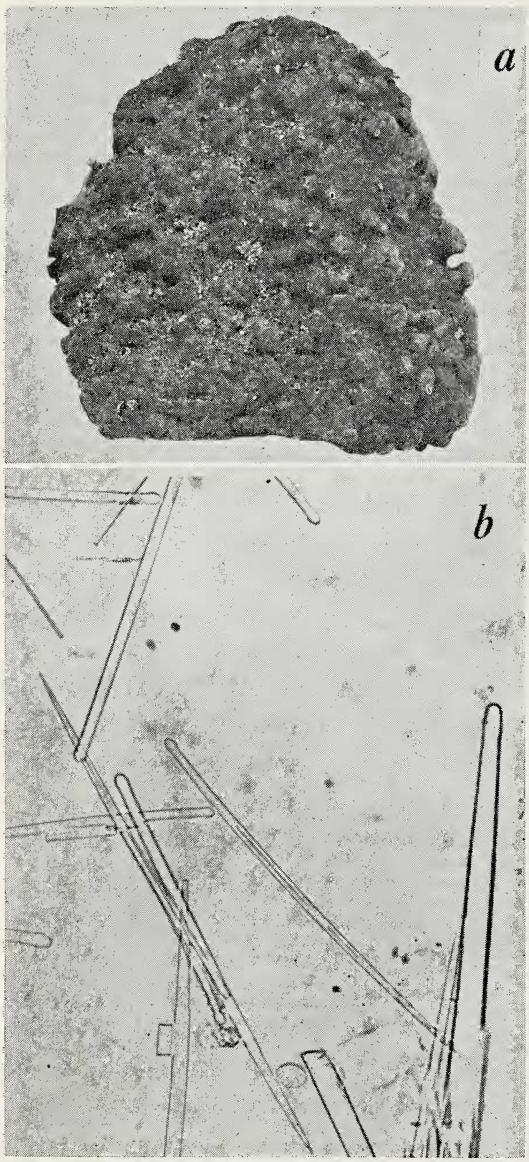


FIG. 16. *a, Polymastia fusca,* sp. nov. *b, Polymastia fusca,* subtylostyli (× 350).

Spicules. Megascleres: subtylostyli of three sizes: (a) .64 × .011 mm.; (b) .4 to .48 × .008 mm.; (c) .14 × .004 mm.

Polymastia granulosa (Brøndsted)

Polymastia granulosa Brøndsted, 1923, p. 162, fig. 36.

OCCURRENCE: Anawhata, Piha; lower midlittoral.

REMARKS: Colour bright yellow.

DISTRIBUTION: Auckland Islands; Subantarctic.

GENUS *Aaptos* (Gray)

Aaptos aaptos (Schmidt)

Synonymy: See Dendy and Frederick, 1924, p. 508.

OCCURRENCE: Stanley Bay; lower midlittoral.

REMARKS: Specimens all typically reddish-purple externally, brownish-yellow internally.

DISTRIBUTION: Mediterranean; West Indies; Indian Ocean; Malaya; Australia.

FAMILY CLIONIDAE (Gray)

GENUS *Cliona* (Grant)

Cliona celata (Grant)

Cliona celata Grant, 1826, p. 79.

OCCURRENCE: Point Chevalier; Kawau Island; Piha. Midlittoral.

DISTRIBUTION: Arctic; Atlantic coasts of Europe and North America; West Indies; Indian Ocean; Malaya; Australia.

Cliona muscoides (Hancock)

Cliona muscoides Hancock, 1849, p. 335, pl. 15, fig. 11.

OCCURRENCE: Spirits Bay at 4 fathoms.

REMARKS: The habit of the present specimen, especially the appearance of its perforations at the surface of the shell, conforms closely with

Hancock's description. The spicules are identical in appearance, save that the oxea are faintly microspined; the measurements differ, however.

	CHILE	NEW ZEALAND
Tylostyli....	.18 mm. long	.1 to .12 × .003 mm.
Oxea.....	.07 mm. long	.052 to .07 × .003 mm.

A difference between the present specimen and the holotype is the presence in the New Zealand sponge of small spiny microrhabds, .007 × .002 mm. No mention is made of these in the holotype. Their distribution is, however, sparse and irregular; they themselves are inconspicuous and could easily have been overlooked. The holotype had infested a shell of *Monoceras fusoides,* a species recorded for Chile only. Other species of Mollusca are common to Chile and New Zealand, and there is no reason to suppose the *Cliona* should not share this wide distribution.

DISTRIBUTION: Chile.

ORDER CARNOSA (Carter)

FAMILY HALINIDAE (de Laubenfels)

SUBFAMILY CORTICIINAE (Vosmaer)

GENUS *Corticella* (Sollas)

Corticella novae-zealandiae, sp. nov.
Fig. 17*a, b, c*

GENOTYPE: *Corticum stelligerum* Schmidt, 1868, p. 25, pl. 3, fig. 6.
Corticella stelligera Sollas, 1888, p. 281.

OCCURRENCE: Rangitoto Island; sublittoral fringe.

DESCRIPTION: An encrusting to massive and depressed sponge, its surface smooth but uneven. Oscules never apparent. The texture is firm and granular. Colour in life white, in spirit pale brown.

Spicules. Megascleres: calthrops, rays .12 to .21 mm. × .026 to .038 mm. The number of rays may sometimes be multiplied to 5 and 6 and some can show a slight dicho-modification. Microscleres: (a) strongylasters .011 mm. in diameter; (b) oxyasters, 5–7 rays .05 to .07 mm. in diameter.

REMARKS: This specimen differs from the only other known species from the Mediterranean in the dimensions of the spicules.

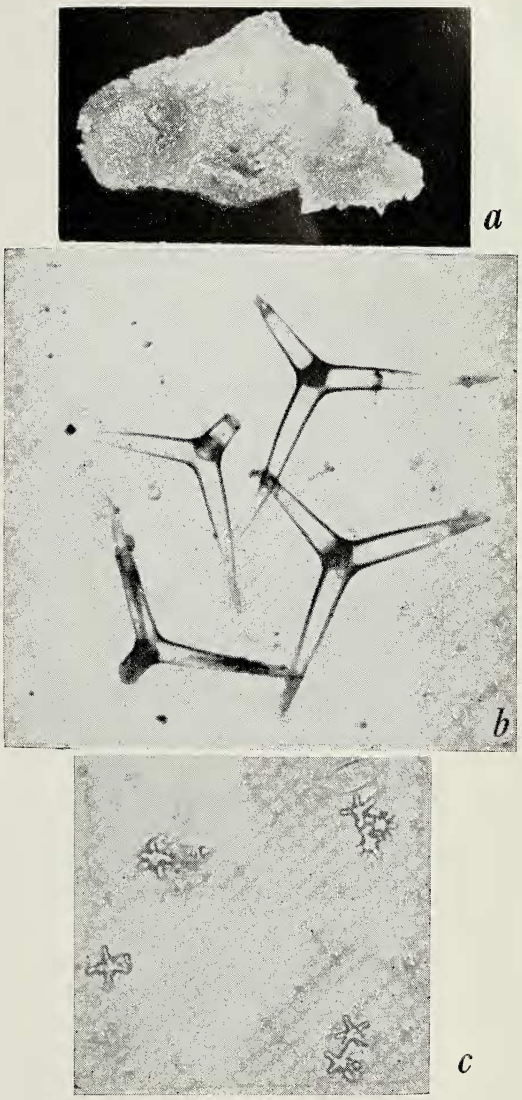


FIG. 17. *a, Corticella novae-zealandiae,* sp. nov. *b, Corticella novae-zealandiae,* typical calthrops (× 80). *c, Corticella novae-zealandiae,* strongylasters (× 350).

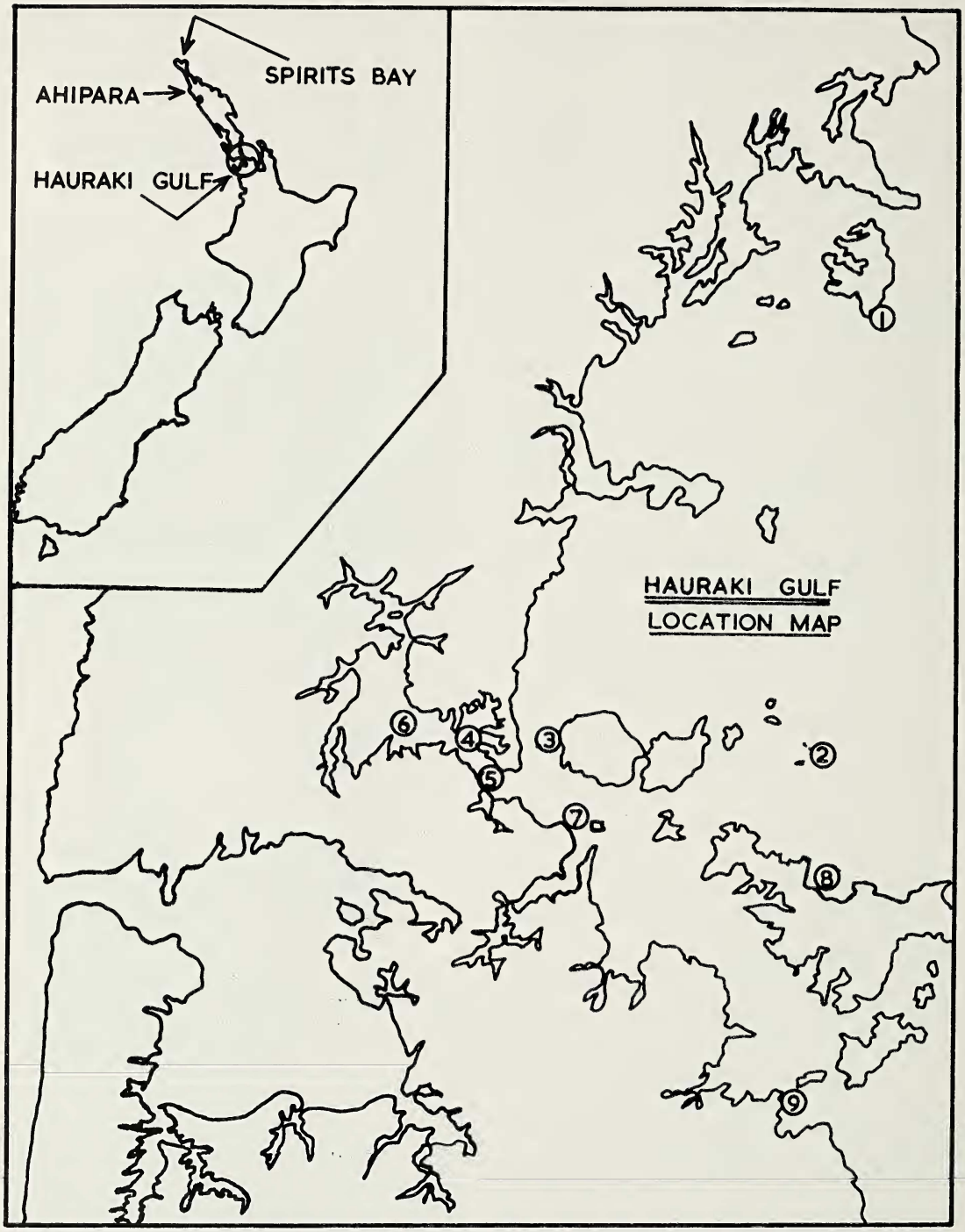


FIG. 18. Location map of Hauraki Gulf (New Zealand inset).

Legend: *1*, Burgess Bay, Kawau; *2*, Noises Islands; *3*, Rangitoto; *4*, Stanley Bay; *5*, Parnell Reef; *6*, Point Chevalier Reef; *7*, Karaka Bay, St. Helier's; *8*, Onetangi, Waiheke; *9*, Waitawa Bay, Clevedon.

GENUS *Plakina* (Schulze)

Plakina monolopha (Schulze)

Synonymy: See Burton, 1929, p. 414.

OCCURRENCE: Rangitoto; midlittoral.

REMARKS: A small yellow incrustation.

DISTRIBUTION: Mediterranean; Atlantic coast of France; West Indies; Antarctic; Japan.

Plakina trilopha (Schulze)

Synonymy: See Burton, 1929, p. 414.

OCCURRENCE: Rangitoto; midlittoral.

REMARKS: A small incrustation, cream to deep purple.

DISTRIBUTION: Mediterranean; Antarctic.

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